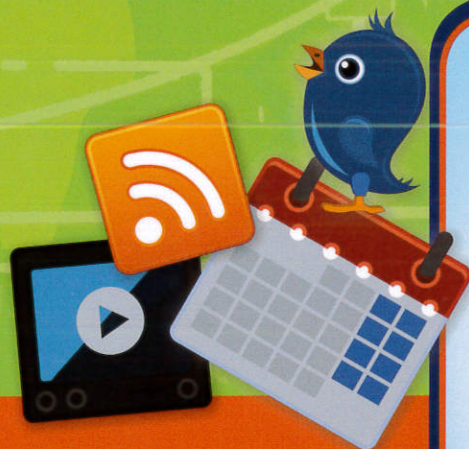


THE TECHNOLOGY TOOLBELT FOR TEACHING



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Kevin E. Johnson

INCLUDES

- 50+ fresh and useful technology tools for teaching
- A decision matrix for choosing and using the right tools
- Examples for using each tool in higher education and K-12



CHAPTER SIXTEEN

VIDEO

How use of this in the classroom has changed

review

For years educators have used video to deliver course content. Whether it is a documentary on the effects of greenhouse gases, a movie version of a recently read book, or Sesame Street, video is used to encourage education through the combined use of visual effects, dialogue, demonstration, and, most recently, viewer interaction. Like with audio, there are tools to both view video and create it. Most computers come with the necessary tools to view video, and with the popularity of hosting services like YouTube and the prevalence of personal cameras, webcams, and cell phones, video is now easier than ever to create. This chapter explores the benefits and challenges for both instructors and students of using video tools to edit content-based video files.

reviewing & creating

Before we talk about the tools used to edit video, indulge us for just a moment as we briefly discuss video capturing. Video capturing refers to recording moving objects. For our purposes, this can either be in the form of live audiences, such as one of you interviewing a professional in the field as a way of providing students with a virtual guest lecture, or it can also mean capturing video that shows what is happening on your screen in order to demonstrate how to complete specific tasks within a particular application, such as Microsoft Word (see Chapter Seventeen, Screencasting, for more information). For this chapter, we'll focus on quick videos you can record using live actors in order to help personalize the learning experience of your students. For this purpose, quick videos captured with a webcam or modern-day mobile phone will most likely do the trick. These devices

keep video files small, and users are usually somewhat familiar with how to use them. There are several compact models on the market that cost as little as \$49.99 and plug directly into your computer for downloading the video files to your hard drive. Some of the new computers even have webcams built into the fronts of their monitors, keeping you from having to worry about external devices.

For more extensive video capturing, an instructor may consider using a personal video camera or a still camera with a video option. These cameras tend to produce higher-quality video files with better audio. These cameras are good for longer videos in which visual content is important to the instructional objectives. For example, a video that demonstrates how to conduct a standard medical exam to determine the difference between possible cancer spots and ordinary freckles will require clear views of the exam process with close-ups on the skin.

After capturing the video, editing is necessary for removing all the extra footage, removing background noises, and adding background music if desired. The editing can be as simple or as complex as a user wishes it to be. To really understand video editing takes a lot of time and practice. This chapter focuses on the more entry-level editing that can be completed using some of the free or inexpensive editing tools currently available. Once the video is captured and edited, uploading the video to your course management system or such a service as YouTube will allow you to distribute the content to your students.

As always, it's important to remember Universal Design and accessibility when creating course content. Don't forget to create transcripts for all videos, or choose a service that allows you to add closed-captioning. A quick tip for those who will be recording live actors: develop a script of what actors will say ahead of time and use that script as the transcript for your students.

What Is the Tool?

In a perfect world, we would all be able to capture a perfect video without “ums” and “ahs,” and we would be able to get everything we needed in one shoot. Well, none of us are perfect, and we are often required to record the same shot multiple times and then paste the pieces together later. Therefore, once the video is captured, it's time for editing before distribution. The tools used to edit videos are the true focus of this chapter.

The word *video* refers to moving images with sound. Videos can be saved to digital files and then distributed and viewed over the Internet. Distribution can be through either a static link that requires students to download the video to their computers or a streaming service that allows students to watch the video directly on the Web without downloading. Videos can also be created like podcasts:

*returns
interviews*

1.5 Edition

visitors to your site can subscribe to a feed that notifies them when new videos have been added. These are called vodcasts, short for video podcasts.

What Problem Does It Solve?

There are some things that are best seen to be understood or appreciated, such as a chemical reaction or the correct position for bowing a cello or the technique for whipping cream. Video solves the problem of demonstrating process and reactions in real time. In this manner, video can also serve as a way for you to give students a virtual experience they couldn't otherwise have. For example, you could provide students with a virtual tour of the ocean floor in an oceanography course—something difficult for the average midwestern student to experience for him- or herself. Diving in local lakes and ponds just isn't the same.

Also, depending on your instructional objectives, video can reduce transactional distance by giving distance students an image and voice to place with your written presence.

Is This Something Instructors or Students Use?

Both instructors and students can create and distribute video. Video can be used for a variety of pedagogical purposes, whereby students can learn from watching or can demonstrate their abilities by creating their own video files. For example, we know of a distance course that teaches introduction to dance in which students watch videos on dance steps and then actually record themselves dancing for the instructor to review.

Is This Tool for the Novice, Intermediate, or Expert?

Creating simple videos by using digital cameras or mobile phones requires novice-level skills. However, more extensive video capturing and editing can necessitate intermediate- or expert-level skills. For example, a project with transitions and titles that a student completes for a film course may require more time and technical competencies than does a simple, thirty-second welcome video from the instructor that needs no edits or transitions.

Is There Special Equipment or Software Needed?

Most computers come with applications that allow you to view video files. Some videos viewed online only require a Web browser, such as Internet Explorer or Safari, and a connection to the Internet. Creating video, however, requires a video-capturing device, such as a webcam or video camera. If the video

includes voice-audio, then a microphone is also required (it may be built into the camera).

Once the video has been captured, if the content creator would like to add background sounds, edit video transitions, or improve the audio quality, video-editing software is required. Both Macs and Windows machines have free video-editing software available that helps even a beginner edit videos like a pro. On Windows machines there is Movie Maker, and on Macs there are iMovie and iDVD for those wishing to publish their finished products onto DVDs. iMovie and iDVD come preinstalled on all Mac machines. Movie Maker was preinstalled on Windows machines until Windows 7 was released. It can now be downloaded for free from Microsoft's Web site.

What Are Some Cautions About This Tool?

The biggest caution when incorporating self-produced videos into your curriculum is to be aware of the time it takes to complete the full production process. With minimal knowledge and no editing, a video can take as little as ten or fifteen minutes to shoot and upload to the Web. However, creating only ten minutes of high-quality video can take up to one hundred hours. This is very important to keep in mind when planning a video project or expecting students to create video in your classroom. Having students capture video is a wonderful way of asking them to demonstrate their skills, but the time it takes for students to complete the task should be calculated into the overall curriculum expectations pertaining to time-on-task. Many instructors do not do this and expect students to create video while managing several other course tasks, which requires full-time hours—something rarely available to all students.

Another caution centers on the resources available. Students who are taking a face-to-face class in which all students are sitting in front of computers, have access to the same software, and are provided with instruction specific to that software may be able to accomplish more in less time than students who are working from a distance, use different computers, and have access to different resources. When expecting students to create video, the more resources complementing the variety of tools the better. Creating and locating these resources on the Web can also be time-consuming.

How Accessible Is This Tool to All Users?

Although videos can be a great resource, they are pointless if they are not accessible to your audience. Like with audio files, it is important that a video either be captioned or be accompanied by a transcript. Using closed-captioning means that words display on the screen as they are being said. Closed-captioning also

includes descriptive text of background sounds, such as applause or music. It requires special software that is usually expensive and difficult to quickly learn to use. However, YouTube now offers a free closed-captioning service for videos that you distribute on their site (see http://www.youtube.com/t/captions_about). There are also commercial companies that will add captions to videos for a fee. This can cost as much as ten dollars per minute of video.

Some students (for example, those who are blind) may need a text-based alternative to be able to produce video files. If students are expected to share their work with peers, it's also important that their work be accompanied by text-based transcripts or narratives explaining the content.

What Additional Vocabulary Do I Need to Know?

Closed Captioning—adding narrative and descriptive text to videos that display in a timely manner relative to what is happening on the screen

Capturing—the act of using a recording device to record moving objects, whether live actors or actions on a computer screen

Editing—cleaning up irregularities and adding titles, subtitles, and credits

Multitrack—having multiple tracks that compress into one file when rendered

Rendering—the act of saving an audio or video file in a specific format so that it can be accessed by the intended audience using a variety of audio and video players

Vodcast—videos created and shared via the Web using syndication feeds so that subscribers can be notified of new posts when available

Can You Share a K–12 Example?

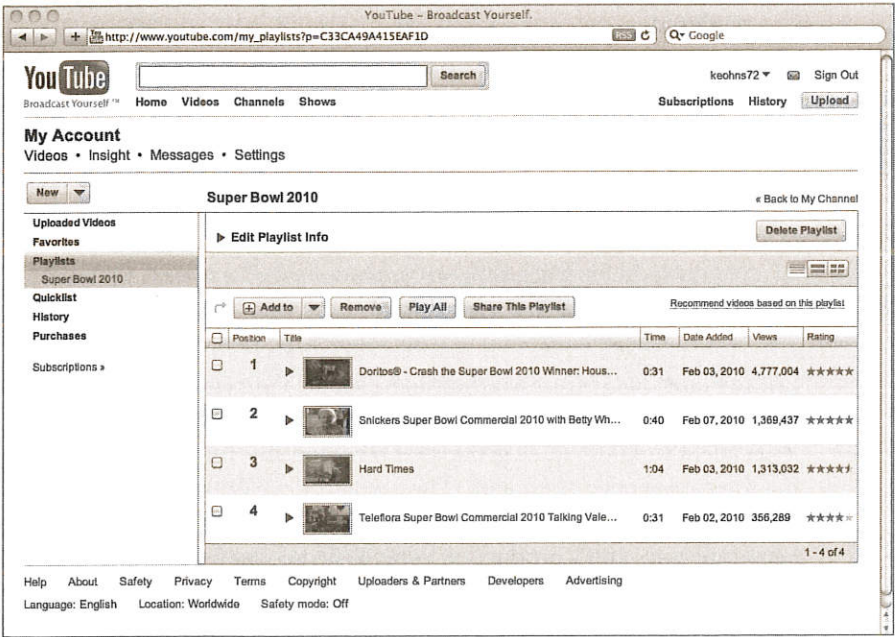
Let's assume that you are a fifth-grade teacher. Your class is learning about the U.S. presidents. Students would be broken up into groups, and each group is assigned a president to study. Each group is also responsible for creating a campaign video for their respective president. They would develop a storyboard regarding the campaign and its overall message, assigning a member to "act" as the president, a cameraperson, and a production crew. With proper training and supervision, students would storyboard their production shoot and use editing software, such as iMovie, to add titles and transitions. The final products would be privately shared with parents on such a service as YouTube. To add a little interaction, parents would also use the comment feature on YouTube to submit time-period-specific

questions that the groups would research and respond to. Another great benefit of this assignment is that students can use this experience to explore the financial difference between campaigning in the past and campaigning now. You could also engage students in discussions about how video changes the campaign dynamics. For example, students could explore whether or not a president seen in a wheelchair would have been elected if he had been shown on air at the time of election.

Can You Share a Higher Education Example?

Suppose as a marketing course instructor, you want your students to analyze the similarities and differences in the commercials during the Super Bowl. You would locate the commercials online and provide links to them for review by the class. Students would be responsible for reviewing each commercial, and then

FIGURE 16.1. INSTRUCTOR PLAYLIST OF VIDEOS FOR STUDENTS TO WATCH ON YOUTUBE



Used by permission.

would participate in a discussion on how the commercials are similar and how they are different based on strategies discussed throughout the course of the class. To help in the analysis process, students could use comments shared within each video's discussion forum to support their arguments about how effective the commercial was. Figure 16.1 illustrates an example playlist page in YouTube, which you could create using your free YouTube account to share specific videos with students based on the given assignment.

Where Can I Learn More?

To learn more about video creation and distribution, we recommend the following resources:

Bourne, J., & Burstein, D. (2008). *Web video: Making it great, getting it noticed*. Berkeley, CA: Peachpit Press.

Smaldino, S. E., & Lowther, D. L. (2007). *Instructional technology and media for learning* (9th ed.). Upper Saddle River, NJ: Prentice Hall.

Currently Available Tools

- Creating Video*
- iMovie at www.apple.com/ilife/imovie/
 - iDVD at www.apple.com/ilife/iddvd/
 - Windows Live Movie Maker at <http://download.live.com/moviemaker>
- Distributing Video*
- YouTube at www.youtube.com
 - TeacherTube at www.teachertube.com
 - Scholastic TeacherShare at <http://teachershare.scholastic.com/>

TABLE 16.1. DECISION-MAKING MATRIX—VIDEO

	iMovie	YouTube
Type of Tool	Presentation of content	Presentation of content
Problem It Solves	This tool helps humanize the learning experience for distance learners and meets instructional objectives pertaining to content best delivered using visual effects, audio, or a combination of the two. Videos with the instructor can help students feel better connected, while visual learners also benefit by receiving content in the preferred medium.	This tool helps humanize the learning experience for distance learners and meets instructional objectives pertaining to content best delivered using visual effects, audio, or a combination of the two. Videos with the instructor can help students feel better connected, while visual learners also benefit by receiving content in the preferred medium.
Cost	Free	Free
URL	www.apple.com/ilife/imovie/	http://youtube.com
Description	The iMovie application is included with the iLife suite, which comes free with new Macs. It allows users to import, edit, and share video files.	YouTube is a Web-based video distribution site where users can upload videos to the site and share them publicly or privately with other Internet users.
Platform	Mac	Web
Best Used For	Creating and sharing content that is optimally delivered using video, such as an instructor's welcome message, video productions, and more	Creating and sharing content that is optimally delivered using video, such as an instructor's welcome message, video productions, and more
Level of Expertise	<i>Teacher:</i> Intermediate <i>Student:</i> Intermediate	<i>Teacher:</i> Basic <i>Student:</i> Basic
Cautions	iMovie only comes with Mac computers and requires some introduction for those unfamiliar with video production. Video editing in general can take time; therefore, instructional objectives must really warrant students' creating content in video format. Due to the specific nature of their projects, students will not be able to rely on technical support for help. They will need to turn to their instructor.	When working with video on a public site, you have to be concerned about copyright, and must be aware that some links may die over time.

TABLE 16.1. (continued)

	iMovie	YouTube
Overcoming Cautions	Apple provides support videos and additional help documentation on the application's Web site. Students may also choose to use products with which they are more familiar or, with your permission, may submit the assignment in a text-based format instead. You can demonstrate the use of iMovie in a synchronous environment as a way of providing students with an introduction to the application.	Try to use videos in which the content is obviously original and belongs to the content creator. Otherwise, you risk violating copyright laws and videos being taken down quickly by YouTube administration, leaving you to search for other videos to use in your class. Also, check links before providing them for your students, and be prepared to find additional videos if and when links die. Finally, when asking students to post to YouTube, give them the option of making their content private and inviting you to watch their videos via links sent over e-mail.
Accessibility Concerns	Apple has a public statement about its commitment to accessibility. Apple's operating system has accessibility features built into all its native applications, including iMovie. Features include screen magnification, voice-over options, and an alternative, more simplified user interface.	When using existing content out on the Web, there is no guarantee that the content is accessible by multiple users with different learning needs and technological skills. Be prepared to find alternative ways to meet your learning objectives.
Special Equipment	Webcam, video camera, or other video recording device; microphone for voice recording; speakers for playback	Speakers for playback

(continued)

TABLE 16.1. (continued)

	iMovie	YouTube
Additional Vocabulary	<p><i>Closed Captioning</i>—adding narrative and descriptive text to videos that display in a timely manner relative to what is happening on the screen</p> <p><i>Capturing</i>—using a recording device to record moving objects, whether live actors or actions on a computer screen</p> <p><i>Editing</i>—cleaning up irregularities and adding titles, subtitles, and credits</p> <p><i>Multitrack</i>—having multiple tracks that compress into one file when rendered</p> <p><i>Rendering</i>—saving an audio or video file in a specific format so that it can be accessed by the intended audience using a variety of audio and video players</p> <p><i>Vodcast</i>—videos created and shared via the Web using syndication feeds so that subscribers can be notified of new posts when available.</p>	<p><i>Closed Captioning</i>—adding narrative and descriptive text to videos that display in a timely manner relative to what is happening on the screen</p>
Training and Resources	www.apple.com/ilife/imovie/	www.google.com/support/youtube/bin/static.py?p=homepage&page=start.cs&hl=en_US